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10/779,402	02/13/2004	Steven J. McCarthy	ID-504 (80226)	2799

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EXAMINER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2009*.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,6,8-10,12,14,15,17,18 and 20* is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-3,5-6,8-10,12,14-15,17-18,20* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to the RCE amendment of the applicant filed on 6/4/09.

Claims 1-3,5-6,8-10,12,14-15,17-18,20 are presented for further examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-3,5-6,9-10,12,14-15,17-18,20 are rejected under 35 U.S.C. 103(a) as

   being unpatentable over Albert et al. (Albert) (US 6,970,913 B1) and further in

   view of Richter et al. (Richter) (US 2003/0046396 A1).

2. Claim 1, Albert teaches a communications system comprising:

   a plurality of servers (i.e. servers 1-3) connected together in a network (i.e.

   network 210) for processing a plurality of different job types (i.e. processing

   incoming and outgoing packets or handling different connections) having

   respective same resource usage characteristics (i.e. usage of processing

   capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col.

   30, L. 14-31; and Col. 31, L. 53-59);

   each server determining a respective health metric thereof based upon at

   least one job being processed (i.e. determining a usage of processing capacity

for each of the virtual machine that is being implemented) thereby and weighting

the health metric (i.e. weighting the usage of processing capacity) based upon

the respective resource usage characteristic of the at least one job (i.e. at least

one virtual machine) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and

Col. 32, L. 49-51); and

said servers mapping the weighted health metrics (i.e. weights) for same

resource usage characteristics to a common scale (i.e. a common level) (Col. 3,

L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3); and

a dispatcher (i.e. service manager 1140 in figure 11A) for collecting the

commonly scaled weighted health metrics (i.e. level of load as a weight factor

which is a number of connections being serviced by each server) (i.e. weights)

from said servers (i.e. servers 1-4) by polling said servers for the weighted health

metrics (i.e. retrieving the weights for each machine is considered as polling the

weights for each server) (Col. 30, L. 43-52; and Col. 32, L. 23-41) and distributing

jobs to said servers based thereon (figure 14; and Col. 3, L. 59-Col. 4, L. 3; and

Col. 30, L. 1-49; and Col. 31, L. 53-Col. 32, L. 51).

Albert fails to teach different resource usage characteristics, and resource

usage characteristic representing resources being consumed by the at least one

job. However, Richter, in the same field of endeavor having closely related

objectivity, teaches different resource usage characteristics (paragraph

368,372,374-375,380); and resource usage characteristic representing resources

being consumed by the at least one job (i.e. "using a resource usage accounting

methodology that characterizes resource consumption for various types of

information management and/or various types of information manipulation tasks,

e.g., in a heterogeneous information management system environment.

Examples of such systems include those described elsewhere herein having

multiple subsystems (e.g., processing engines) performing distinctive functions

with each subsystem having different resource principals... that process different

usage characteristics" in paragraph 368, and "resource usage accounting may

be based on a resource utilization value that is reflective of the system resource

consumption required to perform a particular type of information management

and/or to accomplish a particular information manipulation task. Such a resource

utilization value may also be reflective of system resource consumption required

to perform the particular type of information management and/or to accomplish

the particular information manipulation task" in paragraph 370. According to

these cited paragraphs, the resource usage characteristic, which is representing

resources being consumed or used by the at least one type of information

management or one type of information manipulation task (this is equivalent to

one job), is characterized in the resource usage accounting) (paragraph 368,370-

372,374-375,380).

Thus, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to have incorporated Richter's teachings of different

resource usage characteristics and resource usage characteristic representing

resources being consumed by the at least one job, in the teachings of Albert in

load balancing using distributed forwarding agents with application based

feedback for different virtual machines, for provide an advantage for generating

load balancing for processing engines.

3. Claim 2, Albert and Richter disclose the invention substantially as claimed.
   Richter teaches wherein the resource usage characteristics comprise at least

   one processing utilization characteristic and at least one input/output utilization

   characteristic (paragraph 368,372,374-375,380).

4. Claim 3, Albert and Richter disclose the invention substantially as claimed. Albert
   teaches further comprising a knowledge base for cooperating with said

   dispatcher (i.e. service manager) for storing the weighted health metrics (i.e.

   weights) (Col. 31, L. 49-59).

5. Claim 5, Albert and Richter disclose the invention substantially as claimed. Albert
   teaches wherein said servers provide completed job results to said dispatcher

   (i.e. service manager), and wherein the weighted health metrics are provided to

   said dispatcher with the completed job results (i.e. "the feedback messages from

   the real machines is that the messages somehow express the level of load on

the real machine as a result of handling connections", and "a process executed

on a server for determining a weight to be sent to the service manager in a

feedback message...Next, in a step 1206, the server determines the remaining

processing capacity". From these quotation notes, it does teach the weights are

sent to the service manger with the completed job/process results) (Col. 30, L. 1-

31).

6. Claim 6, Albert and Richter disclose the invention substantially as claimed. Albert

teaches further comprising at least one load generator (i.e. load balance

engine/algorithm) for generating the jobs for said servers and communicating the

jobs to said dispatcher; and wherein said dispatcher further provides the

completed job results to said at least one load generator (Col. 3, L. 59-Col. 4, L.

3; and Col. 8, L. 57-67; and Col. 9, L. 16-22; and Col. 11, L. 56-65; and Col. 12,

L. 46-49; and Col. 30, L. 1-31).

7. Claim 9, Albert teaches a load distributor for a plurality of servers (i.e. servers 1-

3) connected together in a network (i.e. network 210) for processing a plurality of

different job types (i.e. process incoming and outgoing packets) having

respective same resource usage characteristics (i.e. usage of processing

capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col.

30, L. 14-31; and Col. 31, L. 53-59), and each server determining a respective

health metric (i.e. level of load as a weight factor which is a number of

connections being serviced by each server) thereof based upon at least one job

being processed thereby and weighting the health metric (i.e. weight) based

upon the respective resource usage characteristic of the at least one job (i.e.

usage of processing capacity) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-

59; and Col. 32, L. 49-51), the load distributor comprising:

a dispatcher (i.e. service manager 1140 in figure 11A) for collecting the

weighted health metrics (i.e. weights) from the servers (i.e. servers 1-4) by

polling said servers for the weighted health metrics (i.e. retrieving the weights for

each machine is considered as polling the weights for each server) (Col. 30, L.

43-52; and Col. 32, L. 23-41) and distributing jobs to the servers based thereon

(figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-

Col. 32, L. 19); and

said servers mapping the weighted health metrics (i.e. weights) for same

resource usage characteristics to a common scale (i.e. a common level) (Col. 3,

L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3); and

a knowledge base for cooperating with said dispatcher (i.e. service

manager) for storing the commonly scaled weighted health metrics (i.e. weights)

(Col. 31, L. 49-59).

Albert fails to teach different resource usage characteristics and the

resource usage characteristic representing resources being consumed by the at

least one job. However, Richter, in the same field of endeavor having closely

related objectivity, teaches different resource usage characteristics (paragraph

368,372,374-375,380), and the resource usage characteristic representing

resources being consumed by the at least one job (i.e. "using a resource usage

accounting methodology that characterizes resource consumption for various

types of information management and/or various types of information

manipulation tasks, e.g., in a heterogeneous information management system

environment. Examples of such systems include those described elsewhere

herein having multiple subsystems (e.g., processing engines) performing

distinctive functions with each subsystem having different resource principals...

that process different usage characteristics" in paragraph 368, and "resource

usage accounting may be based on a resource utilization value that is reflective

of the system resource consumption required to perform a particular type of

information management and/or to accomplish a particular information

manipulation task. Such a resource utilization value may also be reflective of

system resource consumption required to perform the particular type of

information management and/or to accomplish the particular information

manipulation task" in paragraph 370. According to these cited paragraphs, the

resource usage characteristic, which is representing resources being consumed

or used by the at least one type of information management or one type of

information manipulation task (this is equivalent to one job), is characterized in

the resource usage accounting) (paragraph 368,370-372,374-375,380).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Richter's teachings of different resource usage characteristics and the resource usage characteristic representing resources being consumed by the at least one job, in the teachings of Albert in load balancing using distributed forwarding agents with application based feedback for different virtual machines, for provide an advantage for generating load balancing for processing engines.

8. Claim 14, Albert teaches a job distribution method for a plurality of servers (i.e. servers 1-3) connected together in a network (i.e. network 210), the servers for processing a plurality of different job types (i.e. process incoming and outgoing packets) having respective different resource usage characteristics (i.e. usage of processing capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col. 30, L. 14-31; and Col. 31, L. 53-59), the method comprising:

determining a respective health metric of each server (i.e. determining level of load as a weight factor which is a number of connections being serviced by each server) based upon at least one job being processed thereby and weighting the health metric (i.e. weight) based upon the respective resource usage characteristic of the at least one job (i.e. usage of processing capacity) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and Col. 32, L. 49-51); and

polling the servers for the weighted health metrics (i.e. retrieving the

weights for the machines is considered as polling the weights for the servers)

(Col. 30, L. 43-52; and Col. 32, L. 23-41) mapping the weighted health metrics

(i.e. weights) for same resource usage characteristics to a common scale (i.e. a

common level) (Col. 3, L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3); and

distributing jobs to the servers based upon the commonly scaled weighted

health metrics (figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and

Col. 31, L. 53-Col. 32, L. 19).

Albert fails to teach different resource usage characteristics, and the

resource usage characteristic representing resources being consumed by the at

least one job. However, Richter, in the same field of endeavor having closely

related objectivity, teaches different resource usage characteristics (paragraph

368,372,374-375,380), and the resource usage characteristic representing

resources being consumed by the at least one job (i.e. "using a resource usage

accounting methodology that characterizes resource consumption for various

types of information management and/or various types of information

manipulation tasks, e.g., in a heterogeneous information management system

environment. Examples of such systems include those described elsewhere

herein having multiple subsystems (e.g., processing engines) performing

distinctive functions with each subsystem having different resource principals...

that process different usage characteristics" in paragraph 368, and "resource

usage accounting may be based on a resource utilization value that is reflective

of the system resource consumption required to perform a particular type of

information management and/or to accomplish a particular information

manipulation task. Such a resource utilization value may also be reflective of

system resource consumption required to perform the particular type of

information management and/or to accomplish the particular information

manipulation task" in paragraph 370. According to these cited paragraphs, the

resource usage characteristic, which is representing resources being consumed

or used by the at least one type of information management or one type of

information manipulation task (this is equivalent to one job), is characterized in

the resource usage accounting) (paragraph 368,370-372,374-375,380).

Thus, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to have incorporated Richter's teachings of different

resource usage characteristics and the resource usage characteristic

representing resources being consumed by the at least one job, in the teachings

of Albert in load balancing using distributed forwarding agents with application

based feedback for different virtual machines, for provide an advantage for

generating load balancing for processing engines.

9. Claims 10,12 are corresponding apparatus claims of system claims 2,5.

Therefore, they are rejected under the same rationale.

10. Claim 15 is corresponding method claim of system claim 2. Therefore, it is rejected under the same rationale.

11. Claims 17-18,20 are corresponding computer-readable medium claims of apparatus claims 9-10,12. Therefore, they are rejected under the same rationale.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albert and Richter as applied to claim 1 above, and further in view of Ross et al. (Ross) (US 6,263,212B1).

13. Claim 8, Albert and Richter are relied upon for the disclosure set forth in the previous rejection. Albert teaches the jobs relate to IP packet processing (Col. 6, L. 51-63; and Col. 7, L. 31-39).

Albert and Richter fail to teach the jobs relate to electronic mail (e-mail) processing. However, Ross, in the same field of endeavor having closely related objectivity, teaches the jobs relate to electronic mail (e-mail) processing (Col. 6, L. 1-10).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Ross's teachings of the jobs relate to electronic mail (e-mail) processing, with Richter's teachings of different resource usage characteristics, in the teachings of Albert in load balancing using distributed forwarding agents with application based feedback for different virtual

machines, for provide an advantage for generating load balancing for email

processing.

Response to Arguments

Applicant's arguments filed 6/4/09 have been fully considered but they are not

persuasive.

(A) Albert et al. fails to disclose weighting the health metric based upon the

respective resource usage characteristic of the at least one job, the resource

usage characteristic representing resources being consumed by the at least one

job.

As to point (A), in response to applicant's argument, Albert does disclose

each server determining a respective health metric thereof based upon at least

one job being processed (i.e. each server determines a usage of processing

capacity for each of the virtual machine that is being implemented. The usage of

processing capacity of each virtual machine is considered as the respective

health metric of one job) and weighting the health metric (i.e. "It is partiularly

advantageous to normalize the weight so that the weight of each server

expresses its capacity to process packets" in Col. 30, L. 7-10. That means, each

server weighting its usage of processing capacity and the usage of processing

capacity is from the usages of processing capacity of the virutal machines. Thus,

it is considered as the server weights its health metric) based upon the

respective resource usage characteristic of the at least one job (i.e. each server

includes at least one virtual machine. Therefore, the server's usage of processing

capacity is based upon the usages of processing capacity of the at least one

virtual machine) [figure 14; and Col. 30, L. 1-Col. 31, L. 3, and L. 49-Col. 32, L.

51].

Although, Albert does not disclose the resource usage characteristic

representing resources being consumed or used by the at least one job, but

Richter as the secondary reference, does disclose this feature. For instance, see

Richter, "using a resource usage accounting methodology that characterizes

resource consumption for various types of information management and/or

various types of information manipulation tasks, e.g., in a heterogeneous

information management system environment. Examples of such systems

include those described elsewhere herein having multiple subsystems (e.g.,

processing engines) performing distinctive functions with each subsystem having

different resource principals... that process different usage characteristics" [in

paragraph 368], and "resource usage accounting may be based on a resource

utilization value that is reflective of the system resource consumption required to

perform a particular type of information management and/or to accomplish a

particular information manipulation task. Such a resource utilization value may

also be reflective of system resource consumption required to perform the

particular type of information management and/or to accomplish the particular

information manipulation task" [in paragraph 370]. According to these cited

paragraphs, the resource usage characteristic, which is representing resources

being consumed or used by the at least one type of information management or one type of information manipulation task (this is equivalent to one job), is characterized in the resource usage accounting [paragraph 368,370-372,374-375,380].

In addition, Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Richter's features of different resource usage characteristics and the resource usage characteristic representing resources being consumed by the at least one job with Albert's features to provide and generate load balancing for processing engines or servers.

Therefore, the combination of Albert and Richter has not failed to disclose weighting the health metric based upon the respective resource usage characteristic of the at least one job, the resource usage characteristic representing resources being consumed by the at least one job.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU NGUYEN whose telephone number is (571)272-4242. The examiner can normally be reached on 7AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VIVEK SRIVASTAVA can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. N./
Examiner: Minh-Chau Nguyen, Art Unit 2445

/VIVEK SRIVASTAVA/

Supervisory Patent Examiner, Art Unit 2445